COPY OF PAPERS ORIGINALLY FILED



REMARKS

In response to applicant's Appeal Brief, the Examiner applied a new reference to Kumar (United States Patent No. 5,512,131) using a self-assembled monolayer ink in combination with a planar stamp to pattern metal surfaces. Example 3 of Kumar describes removing the SAM after etching gold lines.

In response, applicants have substantially amended claim 1 to specify that the invention is directed to the fabrication of an organic transistor as noted at p. 5, line 22.

It is applicants' position that there exists in the organic transistor art a belief that the self-assembled monolayer (SAM ink) should be left on the metal surface layer after etching. This is demonstrated by the primary reference to Xia et al. which, as applicants demonstrated in the Appeal Brief, leaves the SAM patterns in place (see Xia, Fig. 1). Corroboration of applicants' position is further provided by the enclosed article to Kymisses, "High-Performance Bottom Electrode Organic Thin-Film Transistors", 48 *IEEE Trans. On Electron Devices*, No. 6, pp.1060-1064. See particularly, p. 1062 under Experimental Procedure. Also see p. 1064, 1st column, first full paragraph.

The secondary reference to Kumar does not refute this position. Kumar does not describe how to make an organic transistor. In fact, Kumar uses a planar stamp which, as the present applicants have pointed out, is unsuitable for transistor fabrication (specification, p. 2, lines 21-22):

Planar stamps are of limited use due to air bubbles that become trapped between the stamp and the substrate.

Thus applicants' amended claim 1 defines an unobvious process for making organic transistors. The primary reference to Xia teaches away from the invention. Kymisses corroborates the prejudice in the art, and the secondary reference to Kumar relates to the fabrication of something different. Accordingly claim 1 as amended and its

dependent claims distinguish from all cited art.

Respectfully submitted,

Glen E. Books

Reg. No. 24,950

Attorney for Applicants

Date: June 25, 2002

LOWENSTEIN SANDLER PC 65 Livingston Avenue Roseland, New Jersey 07068 973-597-6162



VERSION SHOWING CHANGES MADE

Claim 1:

1. A method for [forming at least one patterned layer] <u>making an organic</u> transistor on a substrate comprising the steps of:

providing a substrate including a metal surface layer;

providing a rotatable stamp having relief geometries on its surface to define a stamping surface;

applying a self-assembled monolayer ink to the surface of the rotatable stamp to define an inked stamping surface;

rotating the rotatable stamp [as the substrate] on the metal surface layer as the layer is placed in contact with the stamp to impress on the layer an inked pattern [on the substrate] as defined by the inked stamping surface; and

patterning the [substrate] <u>layer</u> by etching material from [or depositing material on] the [substrate,] <u>layer</u> wherein the inked stamping surface guides the etching [or depositing of material] in a geometry to define the patterned layer useful in fabricating an electronic device; [and]

removing the inked pattern from the [substrate] <u>layer</u>; and <u>applying an organic semiconductor layer overlying the etched metal layer</u>.

Claim 7:

7. The method of claim 6 in which the [at least one coating] metal layer includes a thin layer of gold or silver.

RECEIVED
JUL 0 8 2002
OFFICE OF PETITIONS

Claim 8:

8. The method of claim 1 in which the step of patterning the [substrate] metal layer comprises etching material from the substrate applying an etchant from the group consisting of aqueous ferrocyanide, K₄Fe(CN)₆, K₃Fe(CN)₆, Na₂S₂O₃, and KOH in H₂O.

Claim 9:

9. The method of claim 1, in which the step of rotating the stamp provides an exposed region on the [substrate] metal layer where substantially no ink is present and a protected region on the [substrate] layer where ink substantially covers the [substrate and the step of patterning the substrate comprises etching material from the substrate at the exposed region or depositing of material on the substrate at the exposed region] protected region.

Claim 11:

11. The method of claim 10, in which the [substrate further] metal layer has an applied adhesive layer [applied to the metallic layer] selected from the group consisting of Ti and Cr.

Claim 12:

12. The method of claim 1 in which [the mechanism applies] the inked pattern is removed by ultraviolet light, heat, or wet chemical [means to the substrate to remove the inked pattern] cleaning.

PENETRE E 0.80 Z

LOWENSTEIN SANDLER PC
Attorneys at Law

MALL DATE CANCELLED

Assistent Commissioner for Patents
Attn.: Office of Petitions
Box DAC

Washington, D.C. 20231

HECELY CONTER

RECEIVED

JUL 0 8 2002

OFFICE OF PETITIONS